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4. Larva, stage IV, at end of stage, showing the side horns.
5. Mature larva.
6. One of the deciduous subdorsal horns, lateral view, showing attachments.
7. Hairs at tip of the horn, stage IV, enlarged, showing primary seta ii.
8. Hairs on the outer side of the bulb, showing primary seta i to be differentiated from the secondary hairs.
9. Hairs on the bulb, stage V, showing the beginning of the plumose setæ.
10. A plumose seta, further enlarged, showing the black pigment band.
11. Bulbs and dorsal space, two segments to show the projection of the horn-attachments into the dorsal space.

NEW AMERICAN LEPIDOPTERA.

BY HARRISON G. DYAR,

WASHINGTON, D. C.

Family SYNTOMIDÆ.

***Cosmosoma myrodora*, new species.**

Head shining blue; thorax red, the tegulæ with two blue spots; patagia lined with black, with a blue spot at the base of the wing; palpi black, red at the base; abdomen red, a dorsal black band beginning on the second segment and widening posteriorly, containing a row of metallic blue spots, the last three segments wholly black; venter black, the wool under the ventral valve of the ♂ white; legs red, the middle femora blackish without; antennæ black with white tips. Wings hyaline, the veins and margins black, the band widening at apex of fore wings. Expanse, 34 mm.

East coast of Florida; Indian River (C. V. Riley coll.), Palm Beach (Dyar), Miami (Schaus coll.).

Type. — No. 10739, U. S. National Museum.

This species has been known as *Cosmosoma omphale* Hübn. and *Cosmosoma auge* L., but it differs from the species bearing those names in the extent of the black band, which begins on the second abdominal segment and does not touch the thorax.

***Syntomeida jucundissima*, new variety.**

The form of *Syntomeida epilais* occurring in southern Florida differs from its Mexican and central American representative in the greener tint of the wings, the reduction of the white markings, the wing spots being smaller and the markings on the feet less, and in the different color of the terminal abdominal segments, which are scarlet in the Floridian form, crimson in the Mexican one. The above new name is proposed for the Floridian subspecies.

Palm Beach (Dyar), Miami (R. Ottolengui coll., Schaus coll.), Coconut Grove (E. A. Schwarz).

Type.—No. 10742, U. S. National Museum.

Family LITHOSIIDÆ.

***Crambidia roberto*, new species.**

Fore wings with accessory cell, silvery gray, shining, uniform; hind wings and abdomen dark gray. Vertex and front of head bright ochereous. Beneath entirely dark gray like the hind wings above, the fore wings somewhat shining. Expanse, 28 to 30 mm.

Two males, Mexico City, Mexico, June, 1907 (R. Müller, No. 1040).

Type.—No. 10455, U. S. National Museum.

***Hæmatomis radians*, new species.**

Closely allied to *Hæmatomis mexicana* Druce, the fore wings being the same. In the hind wings there are two whitish rays from the base to the margin on a uniform gray ground in both sexes, whereas in *mexicana* the hind wings of the ♂ are whitish with gray costa, of the ♀ entirely gray including the fringe.

Three specimens, two ♂♂, Orizaba, Mexico (Wm. Schaus coll., R. Müller, No. 1162), one ♀, Cordoba, Mexico (Wm. Schaus coll.).

Type.—No. 11019, U. S. National Museum.

***Rhabdatomis*, new genus.**

Venation of *Diarhabdosia* Hampson, except that vein 5 is present on the hind wings. The genus falls in Sir Geo. Hampson's table with *Eurosia*, an East Indian and African genus (Cat. Lep. Phal. Brit. Mus., ii, 330, 1900), from which it differs in having veins 3 and 4 of the hind wings stalked, not coincident, and vein 11 of the fore wings curved, not straight.

Type.—*Rhabdatomis zaba*, n. sp.

***Rhabdatomis zaba*, new species.**

Head yellow on the vertex, thorax yellow tinged with pink, abdomen yellowish; fore wings gray, the costa, a ray from base to below apex and the internal margin broadly yellow; hind wings whitish, the inner margin yellow, the costa and the apex broadly gray. Beneath as above, the ray on fore wing less distinct. Expanse, 19 mm.

One ♂, Orizaba, Mexico (Wm. Schaus coll.).

Type.—No. 11020, U. S. National Museum.

***Diarhabdosia cora*, new species.**

Head yellow on the vertex, thorax tinged with pink, abdomen ochereous in the male with a gray basal tuft, gray in the female; fore wings straw-yellow with a large gray band from base to apex, narrowly cut by a pinkish yellow ray; hind wings yellow in the male with a broken gray outer border, gray in the female with a yellow costal edge. Expanse, ♂ 15 mm., ♀ 19 mm.

18 specimens, three of them females, St. Jean, Maroni, French Guiana and 60 miles up the Maroni River, French Guiana (collection of Wm. Schaus).

Allied to *Diarhabdosia laudamia* Druce, but much smaller, the ♂ with a broken outer gray border on the hind wings instead of a large gray tip, the ♀ with the costa of the hind wings broadly yellow above and below instead of entirely gray.

This species was not described by Mr. Schaus, as at the time we had identified it as *D. laudamia*. However, I now think it abundantly distinct.

Type. — No. 10920, U. S. National Museum.

***Diarhabdosia mandana*, new species.**

Body yellow, overspread with gray, a pink tint on the tegulæ, the abdomen heavily gray shaded in the ♀. Fore wings straw-yellow, nearly covered by a broad gray band that extends from base to apex, touching the costa subapically and the internal margin at base and just before tornus, divided by a central pale ray. Hind wings whitish in the ♂ with a gray tip, gray in the ♀ with the costa yellow nearly to apex. Expanse, ♂ 22 mm., ♀ 23 mm.

Three males and two females, Castro, Parana, Brazil, and Rio Janeiro, Brazil (collection of Wm. Schaus).

Distinguished from the other species by the yellow along the inner margin of fore wings being divided by gray at base and outwardly. Sir G. F. Hampson has identified this species as *D. laudamia*, but I think it must be a distinct species.

Type. — No. 10921, U. S. National Museum.

***Diarhabdosia laudamia* Druce.**

This species is before me from Mexico, Costa Rica and Peru. The synonymy given by Sir G. F. Hampson (Cat. Lep. Phal., II, 518, 1900) appears to be correct. He cites the species from Guatemala, Costa Rica, Panama, Ecuador, Peru and Brazil. The latter locality is probably wrong.

Family ARCTIIDÆ.

***Calidota angelus*, new species.**

Head white in front, margins of the eyes and vertex crimson; thorax white above, grayish below, a crimson patch at base of wing; legs gray, fore coxæ margined with crimson; abdomen crimson above, white below with a lateral gray line; fore wing gray, the veins narrowly but diffusely white, the costal edge and fringe white; hind wing white: beneath as above, the white lining on fore wing absent. Expanse, 35 mm.

One ♂, Mexico City, Mexico, July, 1907 (R. Müller, No. 1141).

Type. — No. 10923, U. S. National Museum.

Apparently nearly allied to *Pygarcia elegans* Stretch, but the presence of the accessory cell forbids its reference to that genus. The fore tibia has a very large curved apical claw.

***Euchætes psara*, new species.**

Head, pectus and thorax blackish gray, rather roughly haired; abdomen blue-black above, gray below, the anal tuft crimson, smoothly haired except at base where there is a large blackish gray tuft; legs dark gray, the fore coxæ crimson. Fore wing dark gray, sprinkled with white scales, which predominate in an area below the cell and in an oblique wavy band from outer third of inner margin directed towards apex but becoming obsolete above. Hind wing semidiaphanous whitish sprinkled with gray and with a broad gray area along costa and a narrow one on inner margin, the veins dark; beneath as above, the markings of the fore wing not visible. Expanse, 31 mm.

One ♂, Mexico City, Mexico, August, 1907 (R. Müller, No. 1211).

Type. — No. 10924, U. S. National Museum.

Family CERATOCAMPIDÆ.

***Syssphinx colla*, new species.**

Head and thorax ochereous brown, patagia violaceous. Fore wings rather dark pinkish brown, the basal and marginal spaces shaded with violaceous; inner line lost; outer line straight from apex to near middle of inner margin, broad, shaded, blackish violaceous; discal dots two, white, small, in a faint brown cloud; wing sprinkled with blackish specks. Hind wings overspread with crimson, the outer margin colored like the fore wing, violaceous tinted on the edge; a large round obscure blackish discal spot. Beneath the fore wings are crimson on the disk, a large round black discal spot; outer margin gray at the apex, widening below. Hind wings violaceous whitish tinted, grayish at the apex, marked with darker strigæ along the costa. Abdomen yellowish brown above, colored like the fore wings below beneath. Legs dark gray. Expanse, 80 mm.

One male, Orizaba, Mexico (R. Müller, No. 982).

Type. — No. 10448, U. S. National Museum.

Family NOCTUIDÆ.

***Acontia areletta*, new species.**

Head black on the vertex, thorax and abdomen creamy white. Fore wings creamy white at the base, crossed by several pale gray wavy lines; space beyond the median line nearly solidly filled in with leaden gray and black, the creamy ground showing only subterminally; reniform and orbicular rounded, blackish filled, rather large and similar; below the orbicular a curved black line followed by leaden shading; a costal, subapical, quadrate, pure white patch, preceded and followed by a

small white dot. Hind wings white, immaculate. Beneath the markings of upper side faintly repeated. Expanse, 27 mm.

One male, Mexico City, Mexico, June, 1907 (R. Müller, No. 1039).

Type. — No. 10457, U. S. National Museum.

Closely allied to *Acontia areli* Strecker, but the white patch on the fore wings is much larger and the hind wings are immaculate.

Noctua exculpatrix, new species.

Head brown, front black between the eyes; thorax purplish brown, intermixed with black scales, the abdomen lighter. Fore wings broad, purplish brown, the maculation reduced to streaks on the veins, the ordinary lines obsolete; vein 1 blackish lined the whole length, median with veins 3 and 4 continuously black, except for a slight interruption beyond the position of the transverse posterior line, which is slightly indicated by a row of venular dots; veins 2, 5, 6, 7 and 8 lined with black scales, continuously so toward the margin; a row of intravenular whitish dashes indicating the subterminal line; terminal space darker, more grayish than the rest of the wing. Hind wing soiled whitish, the outer margin broadly smoky; veins lined in blackish. Beneath the costæ of both wings are roseate brownish, spreading at the apices; rest of the surface whitish; outer line indicated in a broad smoky band. Expanse, 38 mm.

One female, Elsinore, Utah (U. S. Dept. Agriculture, Bureau of Entomology).

Type. — No. 10822, U. S. National Museum.

Allied to *Noctua piscipellis* Grote, but the veins distinctly lined in black.

Family NOTODONTIDÆ.

Dicentria minotelis, new species.

Fore wing gray, reddish at base along inner margin; a black dash at base below median vein; lines obsolete; a curved black mark on the discal cross-vein; a white, somewhat waved shade across the discal veinlets in the position of the outer line, beyond which is a reddish shade overlaid with blackish between the veins subterminally; a white spot following the dark streak between veins 2, 3 and 3, 4. Hind wings white, tipped with gray at anal angle. Head and thorax dark gray the posterior tuft shaded with vinous and tipped with black. Abdomen ochraceous brown, the tip lighter, the basal tuft gray. Antennæ testaceous. Expanse, 38 mm.

One male, Mexico City, Mexico, June, 1907 (R. Müller, No. 1036).

Type. — No. 10458, U. S. National Museum.

Nearly allied to *D. linita* Schaus from Jalapa, Mex., but the ground color is uniform dark gray and the hind wings are white.

***Apatelodes amaryllis*, new species.**

Olivaceous ochraceous, the veins light; a black bar in the basal space from near the base to the inner line above vein 1; a slight blackish shade below vein 1; inner line whitish, rather broad, oblique from costa to origin of vein 2, then perpendicular to inner margin; an olivaceous blackish shade bordering its upper part, leaves it at the angle and crosses to the outer line, cut by the ochraceous veins 2 and 3; outer line white, strongly, narrowly outcurved over veins 4 to 6, inwardly arcuate between veins 2 to 4, edged within by a defined olivaceous blackish shade which defines a large, round, pale space beyond the end of the cell, bisected by the ochraceous vein 5; an oblique costo-apical white mark, preceded by two black wedge-shaped spots; an olivaceous blackish shade along the outer margin, touching the outer line between veins 4 to 6, cut by the ochraceous veins. Hind wings blackish gray shaded, divided by a whitish line that is angled on vein 5; a black spot on inner margin at the termination of this line; basal half of wing more blackish than outer half, except for a rounded area on inner margin which is ochraceous; outer area cut by ochraceous veins; the line is at about the middle of the wing. Beneath the fore wings have a faint white subterminal line, the costo-apical white mark repeated, but followed instead of preceded by black. Hind wings with an outer white line starting on costa near middle of wing but at once curved outward and becoming submarginal at the anal angle; a blackish line is contiguous with it on costa but separates at vein 5, touching again at anal margin; a blackish shade within to base above vein 2. Patagia and center of thorax lined with black; palpi and pectinations of antennæ black, else olivaceous ochraceous. Expanse, 38 mm.

One male, Mexico City, Mexico, June, 1907 (R. Müller, No. 1035).

Type. — No. 10459, U. S. National Museum.

Not nearly allied to any species known to me.

Family LASIOCAMPIDÆ.***Dendrolimus prosper*, new species.**

Thorax and fore wings chocolate brown, overlaid with grayish; basal half of wing dark, crossed by two wavy, ill-defined lines, between which the ground color is somewhat lightened or yellowish; a round whitish discal dot; outer half of wing lighter, a brown line limiting the dark color, curved at costa and slightly dentate; a brownish line, between which and the subterminal dots the ground color is again yellowish; subterminal dots rounded, blackish, strongly waved in their course. Hind wing dark reddish brown. Below much the color of the hind wings above, a faint dark mesial line on both wings, limiting the somewhat darker basal area, followed by a second faint darker line. Expanse, ♂ 70 to 80 mm., ♀ 95 mm.

2 ♂♂, 1 ♀, Orizaba, Mexico (R. Müller, No. 901; Wm. Schaus coll.).

Type. — No. 10446, U. S. National Museum.

The species is nearly allied to *Eutricha conradti* Druce, but the

fore wings are not so narrow and the hind wings are not so strongly excavated on the costal edge. The markings also are much more distinct, being without the blurring yellow shades of *conradti*, while the lower side of the thorax and abdomen is not heavily shaded with blackish brown; the subterminal spots of the fore wings form a continuous row in the ♂ and are more irregular in position.

The female is larger and paler than the male, but essentially similar; the subterminal dots of the fore wing are partly wanting, but their irregular course is marked by the contrast between the yellowish subterminal shade and the darker terminal color.

***Clisiocampa luteimargo*, new species.**

Pale straw yellow; fore wings with two parallel dark brown lines, the outer slightly wavy, the space between them more or less filled in with brown irrorations, sometimes almost solidly so; hind wings with the basal half faintly brown shaded, the outer half clear straw-yellow. Beneath straw-yellow, a common mesial brown line, within which the basal half of both wings is more or less completely filled in with brown shading. Expanse, ♂ 27 to 32 mm., ♀ 37 mm.

3 ♂♂, 2 ♀♀, Mexico City, Mexico (R. Müller, No. 885; Wm. Schaus coll.).

Type. — No. 10447, U. S. National Museum.

The species is allied to *fragilis* Stretch, but I have seen no form of that species in which the margins of both wings above and below were without irrorations. It is also allied to *azteca* Neumoegen, but has a very different appearance, and none of my 26 *azteca* vary in this direction.

Family GEOMETRIDÆ.

***Pygmæna simplex*, new species.**

Brownish gray, violaceous tinted; the fore wings have two broad smoky brown lines, the inner faint, the outer far removed from the margin; a rounded discal dot on both wings. Expanse, ♂ 26 mm.; ♀ 19 mm.

Eleven specimens, 10 ♂♂ and one ♀, Laggan, Alberta, Canada (Wm. Barnes, Dyar and Caudell), Yellowstone Park, Wyoming (W. D. Kearfott through G. W. Taylor).

Type. — No. 10442, U. S. National Museum.

This is the first record of the genus *Pygmæna* Boisd. in America. A single species is known in Europe, *P. fusca* Thunberg, with an Alpine distribution. Our species is larger than the European form, paler colored, less brownish, and the female is more nearly the color of the male. The females in both species have the wings partly aborted and are more yellowish in color.

***Ripula virginaria* Hulst.**

This species was described from Florida and I have not any specimens before me, yet it seems from the description so near to the Cuban form of *Sericoptera mahometaria* Herrich-Schaeffer that I doubt if they are distinct. There appear to be two species under this name, one smaller, less strongly marked, the antennæ of the male heavily pectinated and yellow, which I have referred to as the Cuban form ; the other larger, more strongly marked, the antennæ shortly pectinated and dark brown. The latter occurs in Mexico, Peru, Brazil and also in Cuba. This is doubtless the true *mahometaria* (*Sericoptera* = *Ripula* Guen.), which was described from Venezuela. Hulst's measurement* of *virginaria* agrees with the true *mahometaria* ; his description with the Cuban form. Mr. J. A. Grossbeck kindly informs me that the type of *virginaria* is in the Hulst collection at New Brunswick, N. J., and that the pectinations of the antennæ are as long as in *vestalis*, the markings agreeing with Mexican specimens of *mahometaria* before him in design, but being less strongly developed. *R. virginaria*, then, will stand as a good species, inhabiting southern Florida and Cuba, where it overlaps the range of *R. mahometaria*.

***Ripula vestalis* Hulst.**

I have two specimens of this species from southern Florida, one collected by myself at Jupiter, Florida, February 21, 1890 ; the other from Cudjo Key, taken by Mr. Pollard. The species has been recently redescribed as *Gonorthus bilineata* by Mr. Warren (Proc. U. S. Nat. Mus., XXX, 543, 1906). Mr. Warren's type is from French Guiana, but it agrees entirely with the Florida specimens.

***Amphidasys exoticaria*, new species.**

Wings brownish gray and pure white ; costal half of basal space brown, dotted with black ; followed by pure white to the inner line ; median space brown, limited by the two lines, black, the inner curved, dentated on median vein, the outer dentated on all the veins, most strongly so on veins 3 and 4 ; a small white discal dot, outlined in blackish ; a blackish shade paralleling the outer line below vein 2 ; space beyond the outer line white, with two rows of brown blotches partly confluent and a few scattered black irrorations. Hind wings white, irrorated with partly confluent brown dots to the submedian line, which is black, angled on vein 4 ; outer space white, with two rows of brown blotches as on the fore wings, broken between veins 3 and 4. Beneath the markings are repeated, somewhat whitish. The top of the

* The measurement given by Hulst is apparently too large. The type is in fragments, but on placing the pieces together the specimen seems no larger than Cuban specimens. Mr. Grossbeck agreed with me.

head, front of thorax, base of abdomen, sides and tip of abdomen white, the rest brown and blackish; abdominal tufts dark brown. Expanse, 64 mm.

One female, Mexico City, Mexico, June, 1907 (R. Müller, No. 1034).

Type. — No. 10456, U. S. National Museum.

The specimen agrees almost exactly with Felder and Rogenhofer's figure of *Amphidasys cladonia* (Plate CXXV, Fig. 13), the marginal spottings being only somewhat more extensive. Were it not that the locality for *cladonia* is given as "Silhet" I should think that the species was before me.

EUCYMATOGE RECTILINEATA, A NEW GEOMETRID MOTH FROM COLORADO.

By GEO. W. TAYLOR,

WELLINGTON, B. C., CANADA.

This species belongs to the group containing in our fauna *E. intestinata*, *gillettei* and *vitalbata*, and to which the generic name *Phibalapteryx* Stephens, used to be applied. It resembles *vitalbata* more nearly than it does *intestinata*, but it is smaller, and the colors are less sharply contrasting. It may be separated at once from any of the three species mentioned by the *straightness* of the extra discal line.

I have had a single specimen of this species in my cabinet without name for a considerable time. The discovery of a second specimen, exactly similar, in the collection of the U. S. National Museum, determines me to describe the form as new.

***Eucymatoge rectilineata*, new species.**

Expanse 25 mm. Prevailing color of wings, warm chocolate brown with the costal and basal areas and the hinder portion of the submarginal band lighter as in *E. vitalbata*. The hind wings are uniformly of this lighter color and not blackish in the median band as in the last named species. The fore wings are crossed by numerous lines as in the other species in the group, but in *rectilineata* the extra discal line runs in an almost straight line from vein 3 to the center of the inner margin and not in a series of scallops. The hind wings are clearer than in the other species, and the lines are pale on a darker ground.

Described from two specimens, one bearing label "Colorado, Las Pinas, 30 May," is in my own collection and the second labelled "Durango, Col., July 8-15," is in the U. S. National Museum and bears their type No. 10371.